

The opinion in support of the decision being entered today was not written  
for publication and is not binding precedent of the Board.

Paper No. 40

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte JOSEPH P. KRONZER and JAMES F. DYRUD

---

Appeal No. 2001-2429  
Application No. 08/661,834

---

HEARD: February 5, 2002

---

**MAILED**

**MAR 19 2002**

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Before COHEN, ABRAMS, and NASE, Administrative Patent Judges.  
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 25-37,  
which are all of the claims pending in this application.

We AFFIRM.

### BACKGROUND

The appellants' invention relates to a fibrous filtration face mask. An understanding of the invention can be derived from a reading of exemplary claim 25, which appears in the appendix to the appellants' Brief.

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Dyrud et al. (Dyrud)

4,807,619

Feb. 28, 1989

Claims 25-37 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in that they fail to particularly point out and distinctly claim the subject matter which the appellants regard as the invention.

Claims 25-37 also stand rejected under 35 U.S.C. § 103 as being unpatentable over Dyrud.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 35) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 34) and Reply Brief (Paper No. 36) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art reference, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

At the outset, we wish to point out that the appellants have elected to allow claims 25-37 to stand or fall together (Brief, page 3), and therefore claims 26-37 will be grouped with representative claim 25.

The Rejection Under The Second Paragraph Of Section 112

The examiner has raised two instances of alleged indefiniteness in the claims, the first of which is that they contain broad limitations together with narrow limitations that fall within the broad ranges, and therefore are indefinite. In this regard, the examiner points to (1) "at least about 40 wt. % thermally bonding fibers in the non-woven fibrous layer" as a broad limitation and "at least about 10 wt. % of the fibers in the non-woven fibrous layer being bicomponent fibers" as being the narrow limitation within the broad range, and (2) "a surface fuzz value not less than 7.5" as a broad limitation and "with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0" as the narrow limitation within the broad range.

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977). In making this determination, the definiteness of the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application, disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id. With regard to the first instance, the claim requires that the non-woven fibrous layer contain at least about 40 wt. % thermally bonding fibers, and that at least about 10 wt. % of the fibers in the non-woven fibrous layer be bicomponent fibers. This clearly is not a range within a range, because the percentages apply to two different components of the non-woven fibrous layer.

\* { Regarding the second instance, the claim states that the non-woven fibrous layer have a fuzz value of not less than 7.5 unless the bicomponent fiber content is 85 weight percent or greater, in which case the fuzz value requirement must exceed 8.0. That also is not a range within a range. From our perspective, both of these recitations would be understood by one of ordinary skill in the art, and neither renders the claims indefinite.

The other matter raised by the examiner is that the phrase "and optionally, staple fibers" renders the claim indefinite. Here we agree with the appellants that the

examiner is reading the claim improperly, for "optionally" applies only to "staple fibers" and not to the remaining portion of the claim, that is, it stops at the comma after "fibers" in line 7. This manner of presenting the subject matter covered by the claim is not improper on its face, nor does it cause the claim to be indefinite, in our opinion. It merely defines the invention as having the option of including staple fibers, in addition to the other recited elements.

The Section 112 rejection is not sustained.

The Rejection Under Section 103

The initial burden of establishing a basis for denying patentability to a claimed invention rests upon the examiner. See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) The question under 35 U.S.C. §103 is not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made. See Merck & Co. v. Biotech Labs., Inc. 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). While there must be some suggestion or motivation for one of ordinary skill in the art to combine the teachings of references, it is not necessary that such be found within the four corners of the references themselves; a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in

the art without any specific hint or suggestion in a particular reference.

See In re Bozak, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Further, in an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof. In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985). Insofar as the references themselves are concerned, we are bound to consider the disclosure of each for what it fairly teaches one of ordinary skill in the art, including not only the specific teachings, but also the inferences which one of ordinary skill in the art would reasonably have been expected to draw therefrom. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966) and In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Claim 25 stands rejected as being unpatentable over Dyrud, which also discloses a fibrous filtration mask. It is the examiner's view that since the Dyrud mask meets all of the requirements of claim 25 insofar as the ingredients and the percentages thereof are concerned, and the mask is formed by thermally bonding the fibers, it follows that the resulting mask will meet the claimed requirements for fuzz values. In other words, the examiner is of the view that Dyrud establishes a prima facie case of obviousness with regard to the subject matter recited in claim 25. The appellant argues in rebuttal on page 5 of the Brief that

[i]f Dyrud's teaching is followed, using its hot molding method, it would not be expected that a surface fuzz value exceeding 8.0 would be achieved,

even when using 100% bicomponent fiber. See Fig. 6 and Table 1 of appellant's specification, where the maximum surface fuzz value for a hot molded web that had 100% bicomponent fiber was not greater than 8.0. In order to achieve higher surface fuzz values, the shaping layers need to be produced in a cold molding method . . . . Dyrud does not teach or suggest a cold molding method for making a shaping layer and therefore Dyrud would not be expected to provide the surface fuzz values of the present invention. Accordingly, Dyrud does not provide a teaching that would have enabled a person of ordinary skill to practice the invention under the terms of 35 U.S.C. § 112, second paragraph. Without an enabling teaching, Dyrud would not have rendered applicants' invention obvious within the meaning of 35 U.S.C. § 103(a).

We understand the appellants' position to be that Dyrud cannot establish a prima facie case of obviousness with regard to the subject matter of claim 25 since the hot molding method disclosed therein for making the disclosed mask is incapable of producing a non-woven fibrous layer having a surface fuzz value exceeding 8.0, as is proven by the tests conducted by the appellants and reported in their specification.

However, our analysis of these test results gives rise to a defect which causes them on their face not to support the appellants' conclusion. Table 1 of the appellants' specification (page 21), sets forth 26 examples of tested non-woven fibrous layers. Example 26 utilized non-woven webs containing 100 wt. % of bicomponent fibers, which causes it to fall within the limitations of claim 25. The above-quoted portion of the appellants' Brief establishes that example 26 encompasses Dyrud's hot molding process. As explained on page 20, the example 26 webs were heated for approximately six seconds, after which "[s]ix shells were randomly selected from each

molded web, each shell was tested for surface fuzz, and the average fuzz values for each group of six were determined" (emphasis added). The specification goes on to state that "[a] comparison of the results of these examples with examples 1-23 demonstrate that the method of the present invention provides unexpected superior results over hot molding processes for forming shaping layers of thermally bonding fibers." If a fuzz value of greater than 8.0 is considered to be the criterion for "superior," 14 of the 26 averages meet this standard.

Be that as it may, the issue before us is whether shells made in accordance with the Dyrud method fall within the scope of claim 25. In this regard, we first point out that the last column in Table 1 is captioned "Avg. Fuzz (1-10)," and therefore the value shown in the column for example 26 represents an average of the six shells tested in the category of 100 wt. % bicomponent fibers. The fact that it is an average is confirmed in the statement from the appellants' specification that we quoted above. "Average," of course, denotes a quantity that represents a middle point between extremes.<sup>1</sup> Thus, the value "8.0" in the cited column of Table 1 is not the maximum achieved by each of the six shells, but is an average of the surface fuzz values of the six shells, that is, the middle point between extremes. In the absence of evidence to the contrary, this gives rise to the conclusion that while the fuzz value of some of the six

---

<sup>1</sup>See, for example, Webster's New Collegiate Dictionary, 1973, page 79.

shells tested was less than 8.0, the fuzz value of at least one of the others was greater than 8.0. This being the case, the appellants' own test data shows that at least some of the shells produced by the Dyrud hot forming process can be expected to have a fuzz value greater than 8.0. The shells having a fuzz value greater than 8.0 would meet all of the requirements of claim 25, although produced by the Dyrud process.

It therefore is our opinion that the evidence provided by the appellants does not overcome the prima facie case of obviousness established by Dyrud, and we will sustain the rejection of representative claim 25 and, it follows, of claims 26-37, which the appellants chose to group therewith.

#### SUMMARY

The rejection of claims 25-37 under 35 U.S.C. § 112 is not sustained.

The rejection of claims 25-37 under 35 U.S.C. § 103 is sustained.

A rejection of each of the claims having been sustained, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal  
may be extended under 37 CFR § 1.136(a).

AFFIRMED



IRWIN CHARLES COHEN  
Administrative Patent Judge



NEAL E. ABRAMS  
Administrative Patent Judge



JEFFREY V. NASE  
Administrative Patent Judge

)  
)  
)  
)  
)  
) BOARD OF PATENT  
) APPEALS  
) AND  
) INTERFERENCES  
)  
)  
)  
)  
)

Appeal No. 2001-2429  
Application No. 08/661,834

Page 11

KARL G. HANSON  
OFFICE OF INTELLECTUAL PROPERTY COUNSEL  
3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MINNESOTA 55133-3427